II-

$$\underset{2.10^{-3}}{Fe^{3+}} + \underset{10^{-3}}{SCN^-} \rightleftharpoons \underset{6.10^{-3}}{FeSCN^{2+}}$$

1°) $\pi = \dfrac{6.10^{-3}}{2.10^{-3}.10^{-3}}.0,1 = 300$

2°) π=k→le système évolue dans le sens inverse.

3°)

$$\underset{2.10^{-3}+x_f}{Fe^{3+}} + \underset{10^{-3}+x_f}{SCN^-} \rightleftharpoons \underset{6.10^{-3}-x_f}{FeSCN^{2+}}$$

$n_t = 2.10^{-3} + x_f + 10^{-3} + x_f + 6.10^{-3} - x_f = 9.10^{-3} + x_f$

$n_t = 9,643.10^{-3} \Rightarrow x_f = 0,643.10^{-3}$ mol

D'où

$n_{Fe^{3+})_f} = 2.10^{-3} + 0,643.10^{-3} = 2,643.10^{-3}$ mol

$n_{SCN^-)_f} = 10^{-3} + 0,643.10^{-3} = 1,643.10^{-3}$ mol

$n_{FeSCN^{2+})_f} = 6.10^{-3} + 0,643.10^{-3} = 5,357.10^{-3}$ mol

Physique :

Exercice N°1 :

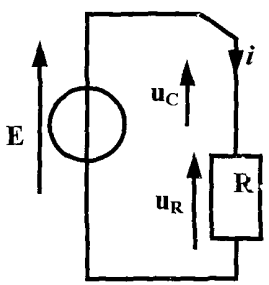
I-

1°) charge d'un condensateur

2°) Loi des mailles

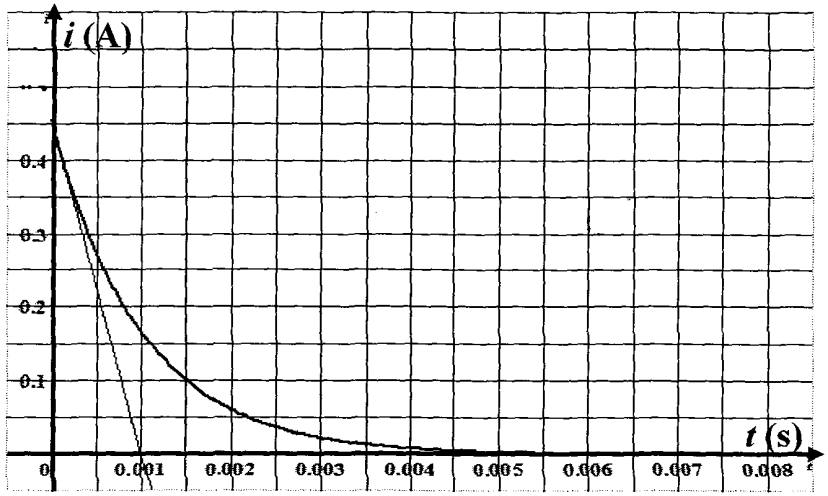
$u_C + u_R = E$

or à t=0s u_C=0 =>u_R=R*I*=E



à $t \to \infty$ $u_C = E \Rightarrow u_R = 0$ d'où $i \to 0$

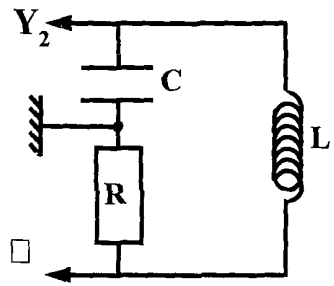
$\Rightarrow I = \dfrac{E}{R} = \dfrac{9}{20} = 0,45A$



3°) D'après la courbe τ=1ms

$\tau = RC \Rightarrow C = \dfrac{\tau}{R} = \dfrac{10^{-3}}{20.10^{-3}} = 5.10^{-7}$ F

II-

1°)

a-